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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/539,734	03/30/2000	Per Hammarlund	042390.P6873	8889

7590

02/08/2006

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EXAMINER

HUISMAN, DAVID J

ART UNIT

PAPER NUMBER

2183

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/539,734

Applicant(s)

HAMMARLUND ET AL.

Examiner

David J. Huisman

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-14,16,18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-14,16,18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 2, 4, 6-14, 16, 18, and 20-22 have been examined.

Papers Submitted

2. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment and Extension of Time as received on 11/16/2005.

Specification

3. In the title, please replace “selectively to advance” with --to selectively advance--.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or canceled from the claim(s):

- the trace of microinstructions comprising a head entry, the head entry comprising a linear address to determine a set of subsequent entries in the trace (independent claims)
- indicating an instruction as being invalid, and based on the invalidity, choosing to retain the instruction (and advancing the write pointer), or choosing not to retain the instruction, (maintaining the write pointer). Applicant's drawings and specification appear to disclose something different from what is in applicant's claims. Looking at Fig.9 and pages 27-30 of the specification, it is explained that

an entire set of microinstructions are written to the queue (step 244). Assume that the first microinstruction is invalid, as applicant claims. This means that the write pointer will be maintained in step 250. But, if there are further uops in the set, and they are all valid so that the same write pointer is advanced (in step 252), then the write pointer is not maintained. That is, will the next microinstruction to be written happen at the first microinstruction's location, or will it be written to a location after all of the valid microinstructions? If the former, how does the system still know about the maintained value? Is it stored in some location? It appears that with this algorithm (flowchart), at the very best, you can only replace the very last invalid microinstruction in the set.

5. The drawings are objected to because of the following: In Fig.9, the paths emanating from block 254 should be labeled "YES" and "NO". Also, steps 242 and 244 read and write a 1st set of uops. After step 254, applicant repeats steps 242 and 244. Does applicant want to reread and rewrite the 1st set of uops, or is another set being read and written?

6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

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renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

7. Claim 1 is objected to because of the following informalities: Please decrease the spacing between lines 11-14, so that all claim spacing is uniform. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1, 2, 4, 6-14, 16, 18, and 20-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. More specifically, regarding claims 1, 13, and 21, applicant has not enabled a system in which the first microinstruction is indicated as invalid and that a decision is made to either retain or not retain the first microinstruction. The specification appears to disclose that if the first

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microinstruction is invalid, a decision is not made to retain the first microinstruction. See the abstract for instance. Applicant should amend the claim, for clarification purposes, such that it makes it clear that the first microinstruction has two states, a first state being a valid state, in which it is part of a trace, the other state being an invalid state, in which it is outside of a trace. Then, a qualitative decision is made based on the validity/state of the first microinstruction. If it is valid, then the first microinstruction is retained, and if it is invalid, then the first microinstruction is not retained. Other similar language would be acceptable. However, at this point, the claim is not clear and applicant has not appears to enable making any decision to retain an instruction if it is already marked invalid. If the examiner is incorrect in his interpretation of applicant's invention, then it is asked that applicant point out the portion of the specification which supports the current claim language.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Farrell et al., U.S. Patent No. 6,704,856, has taught a method for impacting an instruction queue wherein valid instructions in a queue are moved to adjacent locations, thereby filling invalid locations. However, the invalid instructions are invalid because they have already been issued/executed. So, there is no discussion of a write pointer being maintained or that an instruction is overwritten because it is outside of a trace.

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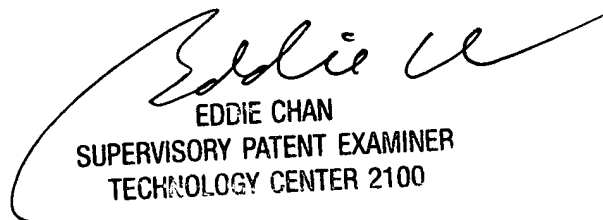
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Huisman whose telephone number is (571) 272-4168.

The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (571) 272-4162. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJH
David J. Huisman
January 31, 2006


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SUPERVISORY PATENT EXAMINER
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